## Remarks

The Applicants appreciate the Examiner's consideration of the application and request reconsideration and allowance based on the preceding amendments and the following remarks.

The remarks follow the various sections of the detailed action.

It is believed that the declaration as filed was correct. In MPEP 602 § VI, "Identification of Application," there is a statement that a sufficient identification of the specification meeting the requirements of 37 CFR 1.63 is found when the Declaration includes, "(A) name of inventors and reference to an attached specification which is both attached to the oath or declaration at the time of execution and submitted with the oath or declaration on filing." Such is the case here. As the requirements of the cited section of the rules have been met, the original declaration was sufficient.

The Examiner objected to the specification in paragraphs 4-6. The appropriate amendments have been made.

The Examiner objected to the drawings in paragraph 7. Figures 1a and 2 show prior art and have been so labeled in the attached replacement drawings. Figures 3 and 4 do not show prior art. The Applicant also noticed that figures 3 and 6 have been mislabeled. This has been corrected in the enclosed replacement drawings.

In paragraphs 8-11, the Examiner objected to informalities which have been resolved in the claim amendments. Note that as claim 1 was amended, its dependent claims were amended in a manner slightly different than as suggested by the Examiner. Please also note that as claim 17 has only one "calculating" step, it is believed that claims 21 and 22 are sufficiently definite.

## Amendments to the Drawings

Amend the drawings as per the enclosed replacement sheets. These amendments are described as follows:

- Figure 1 (a) has been labeled as "Prior Art";
- Figure 2 has been labeled as "Prior Art";
- Figure 3 has been renumbered as "Figure 6";
- Figure 6 has been renumbered to "Figure 3";

The Examiner rejected all of the claims under 35 USC §101. The independent claims have been amended. The claims as amended clearly meet the requirements of 35 USC §101.

Note that these amendments are supported throughout the specification and particularly on pages 7, 17 and 18.

If for any reason the Examiner maintains this §101 rejection, in order to assist the Applicants in considering possible further claim amendments, the Applicants respectfully request that the Examiner "expressly state how the language of the claims has been interpreted to support the rejection" as required in MPEP §2106 IIA.

The Examiner rejected claims under 35 USC § 102 and 103 as set forth in the remainder of the Office Action. The claims as amended are clearly not anticipated by or obvious in light of the references. In paragraph 21, the Examiner stated that the bins of the Abreu units reference cover the same spectral region of interest as would bins having a width as set forth in claim 1. The Applicants agree that the same spectral region may be covered by both the reference and the claimed invention. However, the reference does not teach dividing the spectral region into spectral bins, each having a width of less than one wave number. A primary advantage of the invention is that it is an appropriate band model method for bins having a resolution of less than one wave number. These comments also apply to the rejection of claim 2. Note that the spectral resolution of the method of claim 1 is less than one wave number, which is a finer resolution than that of the reference. As the reference does not disclose this element of claim 1 (note that this element is also in the other independent claims 17 and 23), the reference cannot be used to reject the claim.

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As the references do not disclose each of the elements of any of the independent claims, all of the claims of the subject application are allowable.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Westborough, Massachusetts, (508) 898-1501.

Respectfully submitted,

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